



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,901	01/28/2002	Masatoshi Kokubun	024014-00003	2050

7590 08/09/2006

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 600
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339

EXAMINER

VIEAUX, GARY

ART UNIT	PAPER NUMBER
----------	--------------

2622

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,901

Applicant(s)

KOKUBUN ET AL.

Examiner

Gary C. Vieaux

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 7-9, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

The Amendment, filed June 12, 2006, has been received and made of record. In
5 response to the most recent Office Action, dated February 10, 2006, claims 1 and 5
have been amended, claim 4 has been cancelled, and claims 10 and 13-16 have been
withdrawn from consideration.

Response to Amendment

10 In response to Applicant's amended Drawings, the Examiner finds the amended
figure 2 to properly indicate "Prior Art" material. Therefore, this objection to the
Drawings is hereby withdrawn. Additionally, based on Applicant's call of attention to
indicator 6 of figure 1, which is employed in later figures to illustrate aspects of the
invention, the objection to figure 1 of the Drawings is also hereby withdrawn.

15

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 5 have been considered but
are moot in view of the new ground(s) of rejection.

20

Drawings

Figure 11 should be designated by a legend such as --Prior Art-- because only
that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled

“Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

5 applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

10 form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

15 (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20 **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being anticipated by

Zarnowski et al. (US 6,590,198.)

Regarding claim 1, Zarnowski discloses a CMOS Active Pixel Sensor array (figs.

2 and 3, col. 3 line 46 – col. 4 line 17, col. 8 lines 9-38) which includes a Correlated

Double Sampling circuit to remove fixed pattern noise (fig. 4 indicators 34) followed in

25 connection with column select switches (fig. 4 indicators 96) employed for pixel signal averaging (col. 7 line 43 – col. 8 line 19.)

Regarding claim 2, Zarnowski discloses all the limitations of claim 2 (see the 102(E) rejection to claim 1 supra) including wherein the image averaging circuit carries out the averaging processing of the image data of the plurality of pixel regions on the predetermined one of the horizontal selection lines (col. 8 lines 9-38.)

5 Regarding claim 3, Zarnowski discloses all the limitations of claim 3 (see the 102(e) rejections to claims 1 or 2 supra) including wherein the image averaging circuit carries out the averaging processing of the image data of the plurality of pixel regions on the predetermined one of the vertical selection lines (fig. 4, col. 7 line 43 – col. 8 line 19.)

10

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

15 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20 **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zarnowski et al. (US 6,590,198) in view of Sauer (US 5,920,345.)

Regarding claim 5, Zarnowski discloses all the limitations of claim 5 (see the 102(e) rejections to claim 1 supra) including wherein the noise cancel circuit includes, for each of the vertical selection lines, a correlated double sampling circuit (fig. 4 indicator 34x.) However, Zarnowski does not go into explicit detail regarding the inner

25

workings of the correlated double sampling circuit to disclose an electric charge corresponding to the image data after removal of the noise is held in a first capacitance.

Nevertheless, Sauer is employed to demonstrate the inner workings of a correlated double sampling circuit in which an electric charge corresponding to the image data after removal of the noise is held in a first capacitance (fig. 2 indicators C1 and C2 holding the net signal, col. 5 lines 24-60.)

Regarding claim 6, Zarnowski and Sauer disclose all of the limitations of claim 6 (see the 103(a) rejection to claim 5 supra) including disclosing wherein the image averaging circuit includes a first averaging processing switch for connecting a plurality of the first capacitances to average a plurality of the electric An X-Y address type solid-state image pickup device according to charges ('198 – fig. 4 indicators 96.)

Allowable Subject Matter

Claims 7-9, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 7-9, 11 and 12, the prior art is not found to teach or fairly suggest, in combination with the claims from which dependence is derived, an image pickup device wherein the image averaging circuit includes a second capacitance inserted in parallel with the first capacitance in the correlated double sampling circuit.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pain et al. (US 6,519,371) discloses block averaging of pixels.

5 Cho (US 6,166,367) discloses block averaging of pixels.

Yuki et al. (US 7,071,980) discloses block averaging of pixels.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

10 § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not
15 mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact

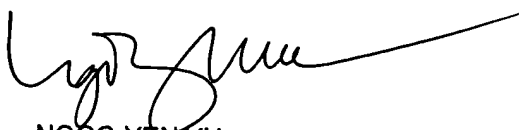
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

5 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen T. Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for
10 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a
15 USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gary C. Vieaux
Examiner
Art Unit 2622

Gcv2


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER